

REMARKS

With this amendment, claims 1-6, 8-14, 16-18 and 21-23 are pending. Claim 7, 15, 19 and 20 are cancelled without prejudice of disclaimer. New claim 21 is supported throughout the specification and by original claim 7. New claim 22 throughout the specification, for example by ¶¶ [0005]-[0006]. New claim 22 throughout the specification, for example by ¶ [0041]. Applicants submit that no new matter is added.

The specification is amended to incorporate preferred spellings of the claims.

Applicants respectfully submit that the rejection of claims 5 and 8-10 as unpatentable over Masuyama et al. in view of Steffl (DE 101 34 142), as set forth in the Office Action is improper and should either be properly reasserted or withdrawn. Steffl is a German language reference with no English language translation provided. The Office Action makes assertions that can not be fully evaluated in the absence of an English translation. For example, the Office Action asserts that Steffl “teaches compatibilizing polymer for syndiotactic polystyrene resins;” and that certain polymers “are functionally equivalent as compatibilizer because they contain a polystyrene backbone that is compatible with the syndiotactic polystyrene base resin and a polar functional group that is compatible with other polar materials in the composition;” and “preparation of poly(styrene-co-maleic acid amide) in which the polymer has a weight average molecular weight of 80,000-12,000 [sic] and wherein 0.1-10 mole % of maleic anhydride groups have no been converted to imide.” Because there is no English language translation of the passages from Steffl cited in the Office Action and no point of reference for applicant to evaluate these statements, the use of this reference in supporting an obviousness rejection is improper absent a translation (see MPEP 706.02, Section II (“a translation **must** be obtained so that the record is clear as to the precise facts the examiner is relying on in support of the rejection.”) (emphasis added)). Accordingly, Applicants request that a translation of this document be provided, along with a precise explanation of the facts being relied upon in making the rejection. Further, because this rejection is improper, any additional Office Action containing rejections that rely on this reference must be non-final.

Specification

The Office Action raises an objection to the specification stating that it is not clear which industrial standard is being applied for determination of properties set forth in the claims. Applicants respectfully traverse. As clearly set forth in the specification, any of the specific tests can be used. (See, e.g., ¶ [0005] (“Different methods can be used for determining the dimensional stability of materials under heat.”)) Nonetheless, in order to expedite prosecution, the various tests cited have been incorporated into the claims. Accordingly, the objection should be withdrawn.

Claim Objections

The Office Action recites various objections to claims 1 and 3-20. Among the objections are several that suggest amending the claims to recite alternative spellings of various materials and make punctuation and grammatical changes. Applicants traverse these rejections. Nonetheless, solely to expedite prosecution, applicants have amended the claims to the spelling referred to in the Office Action and made appropriate punctuation and grammatical changes. The specification has been similarly amended. Accordingly, the rejections based on spellings, punctuation and grammar should be withdrawn. The remaining objections are addressed below.

Claim 1 is objected to as being drawn to a composition exhibiting a feature that has been determined by an ill-defined protocol. Applicants respectfully traverse. As stated above, applicants submit that the protocols are adequately defined in the specification. Nonetheless, in order to expedite prosecution, claim 1 has been amended to include specific protocols. Accordingly, the objection should be withdrawn.

Claim 3 is objected to alleging it is not clear what constitutes "polyamide MDX6." Claim 3 has been amended to recite a generic description of the known polyamide MDX6 polymer. Accordingly, the objections should be withdrawn.

Claim 4 is objected to, suggesting replacement of "syndiotactic diades" with "racemic diads." Applicants submit that this change is arbitrary and unnecessary. Should evidence be presented showing that the existing language would not be understood by persons in the art, applicants will amend the claim as necessary.

Claim 6 is objected to as being unclear whether the graft component is actually present in the composition. Applicants respectfully traverse. Claim 6 places a further limitation of an element of claim 1 and is therefore an appropriate dependent claim. As such, the objection is improper and should be withdrawn.

Claim 7 is objected to for a number of reasons. For clarity and completeness, claim 7 has been rewritten as claim 21. The objections asserting that “grafted olefin homopolymers and copolymers would not be non-polar, as the claim language suggests” is respectfully traversed. Applicants submit that such polymers can in fact be polar or non-polar. Should evidence to the contrary be presented, applicants will consider amending the claims. Absent such evidence, applicants submit that the objection is improper and should be withdrawn. Applicants submit that the remaining objections to claim 7 are corrected in claim 21 and should be withdrawn.

Claims 8 and 9 are objected to alleging it is not clear what applicant intends to describe with respect to groups that have not undergone reaction. Claims 8 and 9 have been amended to clarify the recitation and the objection should be withdrawn.

Claim 15 is objected to under 37 CFR 1.75(c) as being in improper form because it is a multiple dependent claim that makes reference to two other claims. Claim 15 has been canceled, so the objection is moot.

Claims 17-20 are objected to, asserting that the preambles are improper because claims 1 and 2 are drawn to a composition rather than a car body trimming part and production thereof. Claim 18 is also objected to alleging it is unclear because the claim recites "using" without any active, positive steps delimiting how "using" is actually practiced. Claims 17-20 have been amended and the objections should be withdrawn.

Claims 18 and 20 are objected to, alleging it is not clear what is meant by the term "gas inside pressure technique." As suggested in the office action, "gas inside pressure technique" has been amended to recite “blow molding.” Accordingly, the objection should be withdrawn.

Claim Rejections under 35 USC §§ 112 and 101

Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite, asserting that the claim does not set forth any steps involved in the method/process and it

is unclear what method/process applicant is intending to encompass. Claim 16 is also rejected under 35 U.S.C. 101 based on similar reasoning. Applicants respectfully traverse. Nonetheless, in order to expedite prosecution, claim 16 has been amended to recite a particular process. Accordingly, the rejections should be withdrawn.

Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for lack of sufficient antecedent basis for the terms "the injection-molding technique" and "the gas inside pressure technique." Claim 18 has been appropriately amended and the rejection should be withdrawn.

Claim Rejections under 35 USC §§ 102 and 103

Claims 1, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brissot (US. 2004101 10890). Applicants respectfully traverse. Claim 1 has been amended to include a recitation that the polymer composition comprise a polyamide. Brissot discloses polymers based on copolymers of ethylene and acrylates and polyesters, and is silent with respect to polyamides. Accordingly, the rejection should be withdrawn.

Claims 2-7, 11-13, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Masuyama et al. (U.S. 6,013,709) in view of evidence presented in Ishihara et al. (JP 62-187708 and equivalent U.S. 4,680,353). Claim 15 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Masuyama et al. Applicants respectfully traverse.

The present invention is directed a polymer composition that can be used to produce car body trim parts which, once assembled, can withstand the temperatures of approximately 200°C encountered during the cathode immersion-painting, without experiencing deformation. The claims require that a 4 mm thick tension bar produced according to ISO 3167 prepared from the composition has a deflection of less than 15 mm when subjected to a heat sag test at 250°C over a period of 30 minutes. This thermal stability is necessary because the temperatures for current painting operations range from 195 to 210°C. Also, in car bodies manufactured containing mounted metal and plastic parts, it makes sense for reasons of cost and color consistency to paint the plastic parts also with the standard primer, paint and process used for metal parts, so the molded parts must withstand these same conditions. Current formulations based on blends of

polyphenylene oxide and polyamide do not sufficiently meet these thermal stability requirements, and the flow properties and optical appearance are not satisfactory.

Masuyama is directed to a polymer composition having a number of components. Importantly, Masuyama obtains heat aging improvement by requiring the addition of “a copper compound having a specific structure and an iodine compound in specific amounts and in a specific ratio of the amounts.” (col. 2, lines 18-21). The present composition does not require these components to obtain its improved thermal properties. Among the components required by Masuyama is a compatibilizer, referred to as “component (c).” (See col. 2, lines 38-39.) Like prior art compositions, component (c) can be, for example, modified polyphenylene ethers. (See, e.g., col. 6, line 35 to col. 7, line 41.) As described above, use of modified polyphenylene ethers in such compositions can lead to unsatisfactory results with respect to thermal stability, flow properties and appearance. Importantly, all of the working examples in Masuyama utilize a modified polyphenylene ether. Compatibilizers used in the present invention, i.e. a polystyrene copolymer or polystyrene graft copolymer, are particularly distinct in acting also as high-temperature modifiers, which is not disclosed by Masuyama.

The present claims are neither anticipated nor rendered obvious by Masuyama. As set forth above, a 4 mm thick tension bar prepared from the composition must have a deflection of less than 15 mm when subjected to a heat sag test at 250°C over a period of 30 minutes. Given the differences in composition, for example, the use of modified polyphenylene in the examples, there is no guarantee that the compositions of Masuyama meet the requirements of the present invention. The mere recitation of a “laundry list” of polymers as possible compatibilizer agents does nothing to cure this deficiency. There is no sufficiently specific disclosure of the present invention; in particular there is a lack of any working examples that utilize components required by the present invention exclusive of polyphenylene ethers. Thus, Masuyama can not anticipate, nor render obvious, the present invention. Furthermore, Masuyama requires presence of a copper compound with a specific structure and an iodine compound in specific amounts and in a specific ratio of the amounts. These components are obviously critical in Masuyama, but are not required by the present invention. For these reasons, applicants submit that claim 1, and all claims dependent therefrom, are allowable over Masuyama. In particular,

claim 2, written in “consisting essentially of” language is allowable over Masuyama. Accordingly, Applicants submit that the rejections under 35 U.S.C. §§ 102(b) and 103 over Muriyama should be withdrawn.

Claims 5 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masuyama et al. in view of Steffl (DE 101 34 142). Applicants respectfully traverse. First, as set forth above, the Office Action improperly relies on a foreign language reference in this obviousness assertion. Absent an English translation of the reference, the rejection is unclear and should be either properly asserted or withdrawn. Second, Steffl adds nothing to Masuyama that would overcome the specific deficiencies described above. For this reason, the combination of Masuyama and Steffl does not render the present invention obvious. Finally, and without being bound by the following in the absence of a translation, it appears that Steffl is directed to polymers based on polystyrene, not polyamides as in Masuyama. There does not appear to be any disclosure that the copolymers of Steffl would be substitutable for the copolymers of Masuyama. In particular, Muriyama discloses that “the compatibilizer is used for the purpose of increasing the compatibility between component (a) and component (b) and thereby achieving fine dispersion of domains to increase the strength of the interface.” There is no disclosure in Steffl because there is no equivalent of component (a) in Steffl. For at least the above reasons, the rejection of claims 5 and 8-10 under 35 U.S.C. 103(a) over Masuyama et al. in view of Steffl should be withdrawn.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masuyama et al. in view of Paeglis et al. (U.S. 5,569,516). Applicants respectfully traverse. Paeglis is cited only to assert certain properties of a carbon black filler. Thus, Paeglis adds nothing to Masuyama that would overcome the specific deficiencies described above. For this reason, the combination of Masuyama and Paeglis does not render the present invention obvious and the rejections should be withdrawn.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masuyama et al. in view of Saito et al. (U.S. 5,104,937). Applicants respectfully traverse. Saito is cited only to assert that high impact polymers are useful for making injection molded automobile parts such as a door panel or quarter panels. Thus, Saito adds nothing to Masuyama that would overcome the specific deficiencies described

above. For this reason, the combination of Masuyama and Saito does not render the present invention obvious and the rejections should be withdrawn.

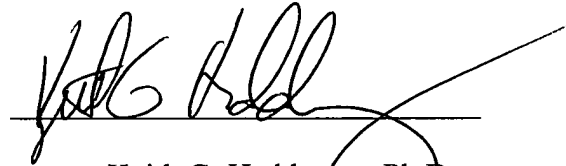
Conclusion

All of the stated grounds of objection and rejection are believed to have been properly overcome, traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. An early notice indicating the allowability of claims 1-6, 7-14, 16-18 and 21-23 is respectfully requested.

The Examiner is respectfully requested to contact Applicant's undersigned Representative if necessary to place the application in condition for allowance.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read 'Keith G. Haddaway', written over a horizontal line.

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